ANDREYEV, B.I.; VORONTSOVA, A.N.; DANILOV, A.D.; KISTANOV, V.V.; KOSTENNIKOV, V.M.; KUSHNER, A.I.; LEDOVSKIKH, S.I.; LESNOV, M.F.; MALINOVSKIY, E.P.; MOSHKOVA, N.V.; MUKHIN, G.I.; PASHKEVICH, V.I.; RZHEVUSKAYA, D.M.; SAVCHENKO, N.A.; SKOBEYEV, D.A. [deceased]; LISOV, V.Ye., red.; SAZANOVICH, N.K., red.

[Economic regions of the U.S.S.R.] Ekonomicheskie raiony SSSR. Moskva, Ekonomika, 1965. 589 p. (MIRA 18:6)

1. Moscow. Institut narodnogo khozyaystva. 2. Kafedra ekonomicheskoy geografii Moskovskogo instituta narodnogo khozyaystva im. G.V.Plekhanova (for all except Lisov, Sazanovich).

KOSTENOK, R.A.

Current literature on microfauna held in the Ukrainian Scientific Research Institute for Mining and Ore Dressing. Paleont.sbor. [Lvov] no.1:167-168 '61. (MIRA 15:9)
(Ukraine--Paleontology--Bibliography)
(Bibliography--Ukraine--Paleontology)

Z/034/60/000/07/009/029
E073/E535

AUTHORS: Holéczy, Július, Engineer and Koštenská, Irena, Engineer

TITLE: Commercial Classification of Metals

PERIODICAL: Hutnické listy, 1960, No 7, pp 545-546

ABSTRACT: The author proposes a classification of metals into the following categories: ferrous, heavy, light, precious, high melting point, rare earth, semiconductor, dispersed (gallium, indium and thalium) and radio-active metals. This classification is summarized in Table 1. There are 1 table and 4 references, 3 of which are Czech and 1 Soviet.

ASSOCIATION: Hutnícka fakulta VŠT, Košice (Metallurgical Department, Košice)

Card 1/1

SEHNALEK, F.; KOSTENSKA, I.; KOLLER, R.

Complex utilization of the Praovce-Svabovce manganese ore. Sbor VST Kosice 1:105-110 '64.

1. Chair of Metallurgy of the Higher School of Technology, Kosice. Submitted March 27, 1963.

KOSTENSZKY, K; OLAH, E.; HADHAZY, Cs.

Investigation of chondrogenesis. II. Conditions of vascularization in the formation of joints. In German. p. 271.

ACTA BIOLOGICA. (Magyar Tudomanyos Akademia) Budapest, Hungary. Vol. 9, No. 3, 1959

Monthly List of East European Accessions, (EEAI) LC, Vol. 9, No. 1, Jan. 1960

Uncl

HADHAZY, Csaba (Debrecen 12, Anatomia, Ungarn.); OLAH, Eva (Debrecen 12, Anatomia, Ungarn.); LASZLO, Maria (Debrecen 12, Anatomia, Ungarn.); KOSTENSZKY, Katalin (Debrecen 12, Anatomia, Ungarn.)

Investigations of chondrogenesis. V. Data concerning the mechanism of reduced respiration in the course of neodifferential chondrogenesis. Acta biol Hung 12 no. 1:17-34 '61.

1. Institut fur Anatomie, Histologie und Embryologie (Vorstendi: St. Krompecher) der Medizinischen Universitat, Debrecen.

HADHAZY, Cs.; OLAH, Eva H.; LASZLO, Maria B.; KOSTENSZKY, Katalin S.

Studies on the formation of cartilage. VI. Anaerobic and aerobic glycolysis in the regenerating joint surface. Acta biol. acad. sci. Hung. 13 no.1:31-57 '62.

1. Institut fur Anatomie, Histologie and Embryologie, Medizinische Universitat Debrecen (Vorstand: I. Krompecher).
(CARTILAGE) (REGENERATION)
(CARBOHYDRATE METABOLISM)

KOSTENSZKY, Katalin

The effect of prednisolone (a glucocorticoid) on the neodifferential cartilage formation. Acta biol. Acad. sci. Hung. 6 no.2:129-138 '54

1. Institute of Anatomy, Histology and Embryology, Medical University, Debrecen (Head: St. Krompecher).

HUNGARY

HADHAZY, Csaba, KOSTENSZKY, Katalin, MANDI, Barnabas, OLAH, Eva; Medical University of Debrecen, Institute of Anatomy, Histology and Embryology (Debreceni Orvostudomanyi Egyetem, Anatomiai, Szovet- es Fejlodestani Intezet).

"Changes in the Serum Hexosamine Concentration of Dogs Following Thymectomy and Arthroplasty."

Budapest, Kiserletes Orvostudomany, Vol XIX, No 1, Jan 67, pages 94-97.

Abstract: [Authors' Hungarian summary] Thymectomy was performed on 6-7 week old puppies and was followed by arthroplasty 3 weeks later. Serum hexosamine determinations were made previous to the two operations as well as on the 7th, 33rd and 70th days after the second operation. It was found that a considerable increase in hexosamine concentration develops following the thymectomy which increases further by the 7th day after the arthroplasty to return to normal within a month. Animals belonging to the control group reacted essentially in a similar manner, although to a lesser degree, following arthroplasty . It is assumed that the changes in the hexosamine level are of identical character in both cases: aspecific and a result of the surgical intervention. 8 Hungarian, 14 Western references. [Manuscript received 25 Mar 66.]

1/1

KOSTENYUK, A.M.

Form of the supply voltage curve for electrostatic precipitators. Energ. i elektrotekh. prom. no.1:24-27 Ja-Mr '63. (MIRA 16:5)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Precipitation (Chemistry)) (Electrostatic precipitation)

KOSTENYUK, A.M.

Testing an electrostatic precipitator at the Lokhvitsa Alcohol Plant. Trudy KTIPP no.21:57-60.'59. (MIRA 14:1)
(Lokhvitsa—Alcohol) (Filters and filtration)

KOSTENYUK, A.M.; POPOV, V.D.

Ionic protector for preventing the contamination of high-voltage insulators of electrostatic precipitators. Energ. i elektrotekh. prom. no.4:62-64 O-D '63. (MIRA 17:10)

KOSTENYUK, N.N.; KURILENKO, O.D.

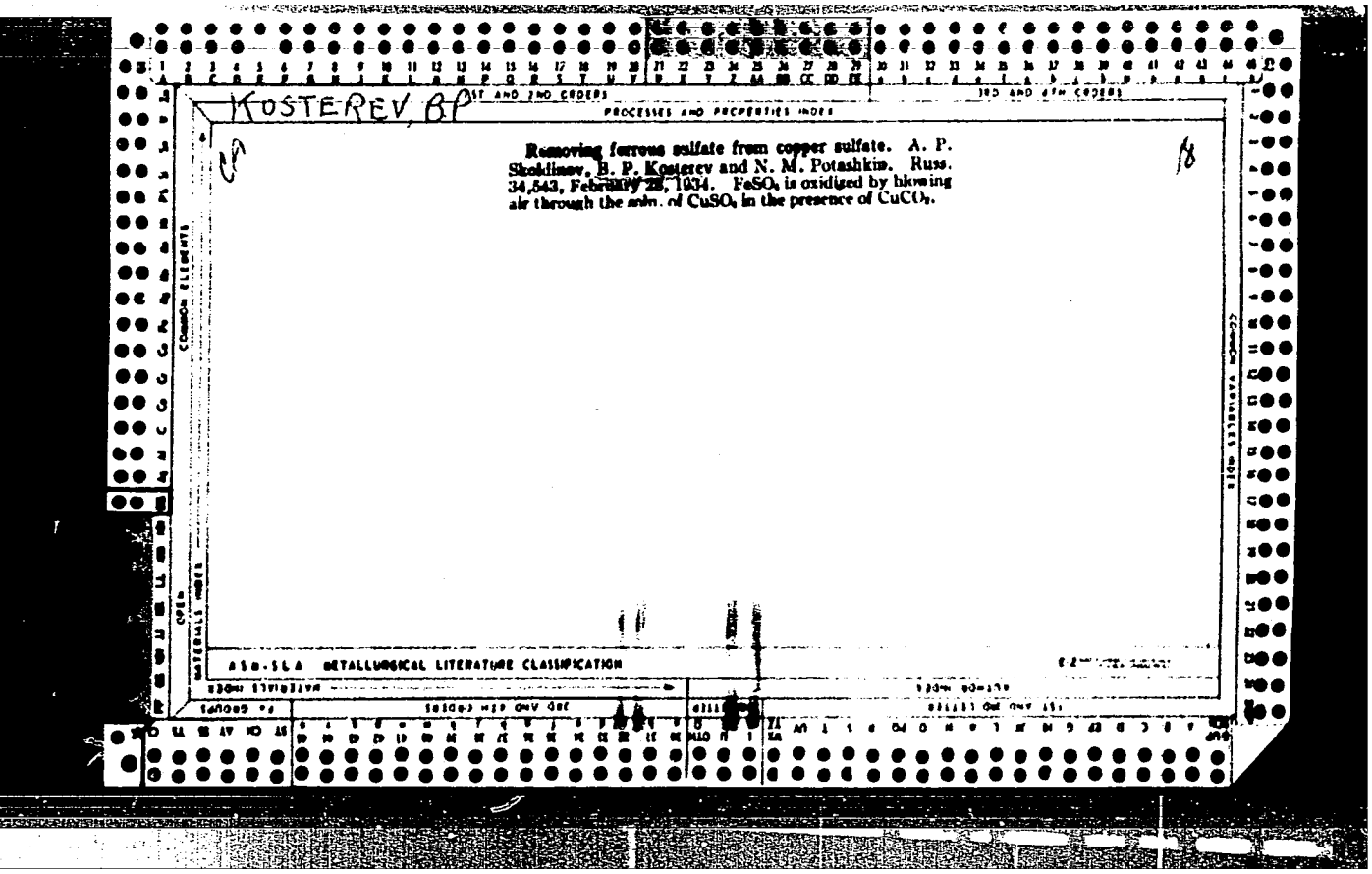
Investigating the kinetics of saccharose hydrolysis in the presence of cation exchangers in H-form. Izv.vys.ucheb.zav.; pishch. tekh. no.3:46-49 '63. (MIRA 16:8)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti, kafedra fizicheskoy i kolloidnoy khimii.
(Hydrolysis) (Ion exchange resins) (Sucrose)

KARTASHOV, A.K.; KOSTENYUK, N.N.

Objective determination of spectral color in the products of the sugar manufacture. Sakh.prom.35 no.3:18-20 Mr '61. (MIRA 14:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut sakharnoy promyshlennosti.
(Colorimetry) (Sugar manufacture)


KOSTEREV, BP

PROCESSES AND PROPERTIES INDEX

Removing ferrous sulfate from copper sulfate. A. P. Skoldinov, B. P. Kosterev and N. M. Potashkin. Russ. 34,543, February 28, 1934. $FeSO_4$ is oxidized by blowing air through the soln. of $CuSO_4$ in the presence of $CuCO_3$.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KOSTEREV, B.P.

Work practice of the ampule department of the Semashko Chemical and Pharmaceutical Plant. Med.prom. no.1:26-29 Ja-Mr '55. (MLRA 8:5)

1. Glavnoye upravleniye khimiko-farmatsevticheskoy promyshlennosti.
(PHARMACY,
ampul prod. in Russia)

S/184/61/000/001/003/014
A104/A029

11.3900

AUTHORS: Chechetkin, A.V., Candidate of Technical Sciences and Kosterev, F.M., Engineer

TITLE: The Heat Emission of Liquid Ditolyl Methane at Transient and Turbulent Flows.

PERIODICAL: Khimicheskoye Mashinostroyeniye, 1961, No. 1, pp. 22-24

TEXT: The recently introduced use of diphenyl mixture and liquid ditolyl methane as high temperature heat carriers is discussed. Values of the thermophysical constant of liquid ditolyl methane obtained by experiments were expressed by the empirical formula derived by A.V. Chechetkin as: $\gamma = 997 - 0.73t$, $c_p = 0.358 + 0.00068t$, $\lambda = 0.00223T^{-\frac{1}{2}} c_p \gamma^{\frac{1}{2}}$, $\mu = 1.38 \cdot 10^{-7} e^{\frac{2425}{T}}$, in which γ = specific gravity in kg per m^3; c_p = specific heat in kcal per kg°C; t and T = temperature according to °C and °K, λ = heat conductivity in kcal per m hour degree and μ = dynamical viscosity in kgs·m^2. Similar thermophysical constants of liquid ditolyl methane and diphen-

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20389

S/184/61/000/001/003/014
A104/A029

The Heat Emission of Liquid Ditolyl Methane at Transient and Turbulent Flows

yl mixtures indicate identical thermokinetic properties. For the purpose of obtaining further data the authors carried out experiments with regard to heat emission of liquid ditolyl methane in transient and turbulent motions. The design of the experimental installation is shown in Fig. 1. Ditolyl methane was electrically heated to desired temperatures and driven through the experimental section (5) by a MП-90 (MP-90) propeller pump. The electric heater consisted of 5 x 1 mm Nichrome tape wound on the experimental section. Constant temperature of ditolyl methane was maintained by a water cooler (3). The whole installation (except cooler) was asbestos insulated. The determination of specific thermal flows and wall temperatures was based on the principle of stationary heat conductivity of thick-walled cylinders (Refs. 3 and 4) according to Fourier's theorem. For this purpose six 1.3-mm diameter and 40-mm deep cylindric channels were drilled into each surface plane of the experimental section and Chromel-Alumel thermocouples were placed within. The mean arithmetic value of the temper-

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S/184/61/000/001/003/014
A104/A029

The Heat Emission of Liquid Ditolyl Methane at Transient and Turbulent Flows

ature of ditolyl methane at entering and leaving the experimental section was assumed as mean temperature. All temperatures were measured by the potentiometric method and the velocity of ditolyl methane by the gravimetric method. About 26 experiments were carried out under the following conditions: specific variations of thermal flow were 92,250-329,000 kcal/m^2 per hour; thermal heads 27.8-156.7°C; Reynold's number 2,220-116,000. Correction $\varepsilon_l = f\left(\frac{l}{d}\right)$ with respect to the effect of the initial pipe section was introduced into the treatment of the obtained experimental data. In the transition zone the values of these corrections were determined by interpolation. All experimental data were treated in the form of the following criteria dependence $K_o = a\,Re_{liq}^n$, in which

$$K_o = \frac{Nu_{liq}}{Pr_{liq}^{0.43}\left(\frac{Pr_{liq}}{Pr_w}\right)^{0.25}}; \quad Nu_{liq} = \frac{\alpha d_e}{\lambda_{liq}} = \text{Nusselt's number}; \quad Re_{liq} = \frac{v d_e}{\nu_{liq}}$$

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$Re_{liq} \geq 5{,}000$. There are 2 figures and 9 Soviet references.

Card 4/6

18.3200

77136
SOV/148-59-9-6/22

AUTHORS: Kosterev, L. B. (Engineer), Oyks, G. N. (Professor)

TITLE: Liberation of Gas During Solidification of 18-Ton Ingots

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1959, Nr 9, pp 61-72 (USSR)

ABSTRACT: This is a study of gas liberation during solidification of 18-ton ingots at various degrees of oxidation and various compositions of steel; also an investigation of the part played by atmospheric oxygen which oxidizes the surface of ingot metal during the rimming action in molds in the process of gas formation. The metal was produced by the scrap-ore process in basic 220-ton open hearth furnaces with magnesite-chromite roof and a special arrangement for the oxygen blowing of the bath. The reduction of rimmed steel by ferromanganese was performed in the furnace and in the ladle. The installation for investigation is shown on Fig. 1. The liberated (during the ingot solidification)

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gas was collected by means of an iron welded hood, which was lowered by a hoist into the liquid metal to about 50 mm depth.

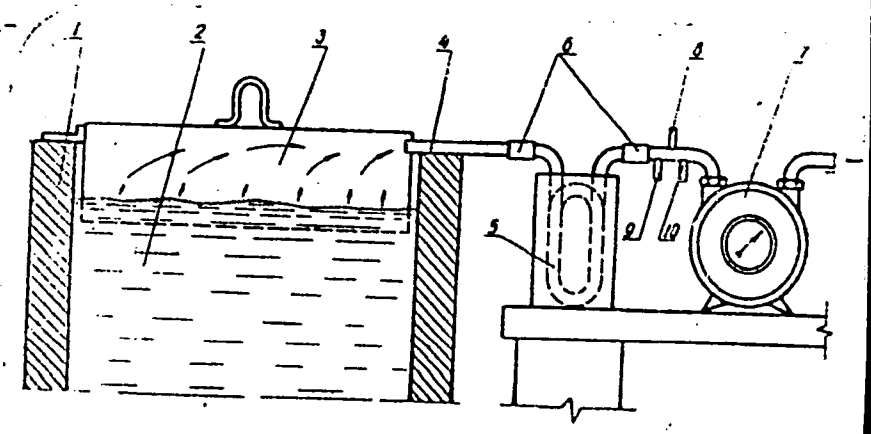

Fig. 1. An installation for collection of gas liberated during the solidification of an ingot: (1) mold; (2) liquid metal; (3) gas-collecting hood 1320 x 570 x 400 mm; (4) 3/4"-diameter outgoing pipe; (5) cooler; (6) connecting pipe; (7) gas meter GK-6; (8) mercury thermometer; (9) U-shape manometer; (10) outlet for taking gas samples.

Liberation of Gas During Solidification of 18-Ton Ingots

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The results of measuring the amount of gas and the speed of its liberation are given on Fig. 2. The relationship between the amount of solidified metal and the amount of liberated gas for steels 08kp and 3kp is given on Fig. 3. A direct connection between the liberated gas and the solidified metal confirms the conception that the rimming action of steel in the molds is caused by the enrichment of the liquid portion of the ingot by the admixtures resulting from the crystallization of steel. A similar connection for 5.2-ton ingot was established by A. Gayes and D. Chipman (Ref 1, Gayes, A., Chipman, D., Metallurg, Nr 4 and 5, 1939). The composition of gas in rimmed steel, killed steel, and semi-killed steel, and the oxidation of metal in the molds by oxygen of the air are discussed. The authors arrived at the following conclusions: (1) The amount of gas liberated in the process of steel crystallization and the speed of gas liberation are determined by the composition of steel. The increase of dissolved oxygen in steel results in the increase

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Liberation of Gas During Solidification of 18-Ton Ingots

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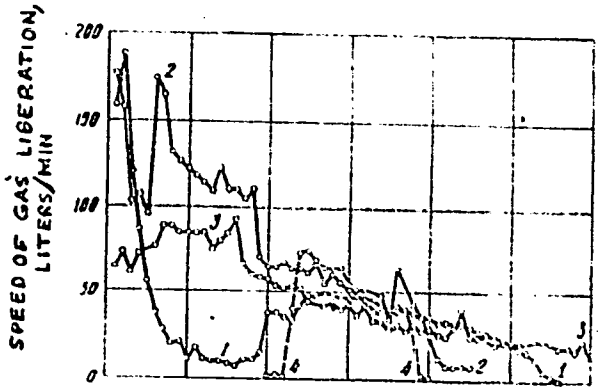

Fig. 2. The amount and speed of gas liberation during solidification of the ingot: (1) steel 08kp ingot (experiment 1); (2) steel 0.8kp ingot (experiment 2), a stream of metal was blown by oxygen; (3) steel 3kp ingot (experiment 3); (4) semi-killed steel 08ps ingot (experiment 4); (5) killed steel 08_{10} ingot (experiment 5).

(Second half of figure 2 on the next card)

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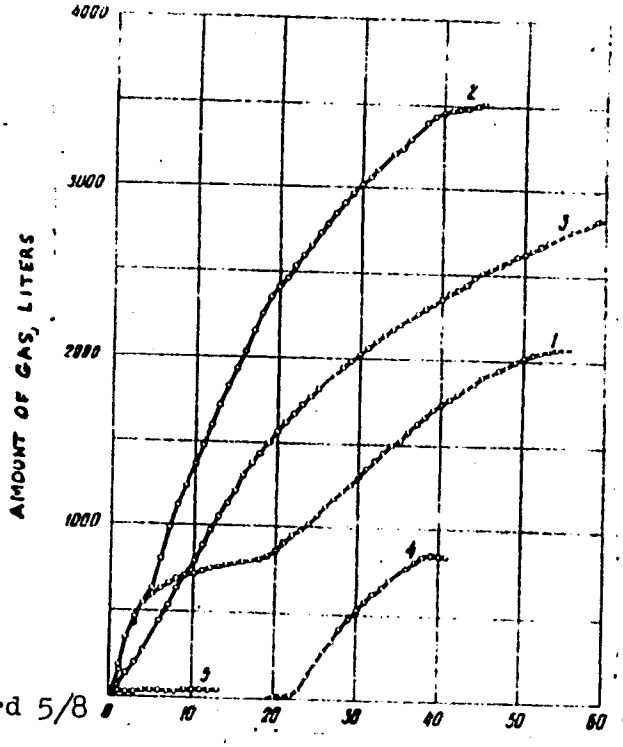

Fig. 2.

Caption on preceding card

Liberation of Gas During Solidification of 18-Ton Ingots

77136 SOV/148-59-9-6/22

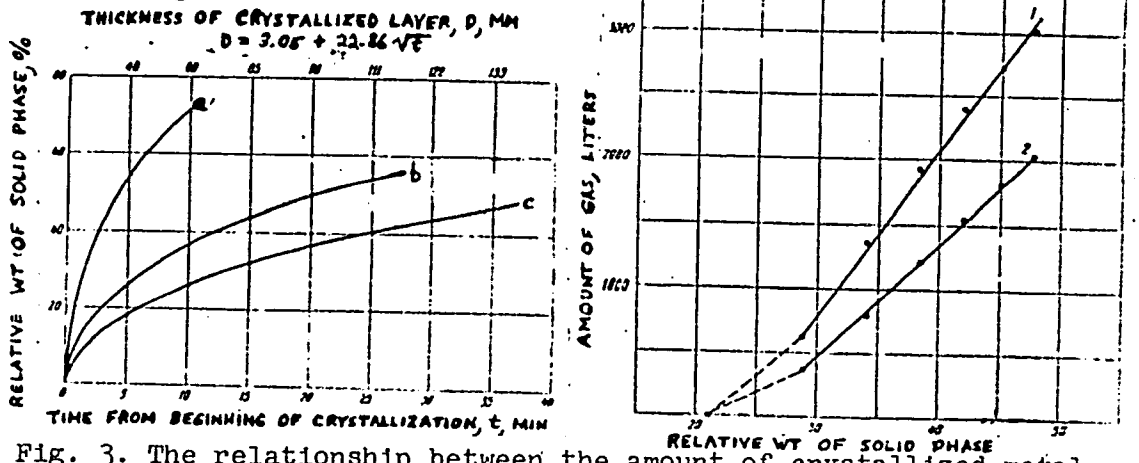

Fig. 3. The relationship between the amount of crystallized metal and the amount of liberated gas: (1) steel 08kp ingot.(experiment 2); (2) steel 3kp ingot (experiment 3); (a) steel ingot about 0.8 ton, 300 x 300 mm; (b) steel ingot about 6.5 ton, 650 x 730 mm; (c) steel ingot about 18 ton, 740 x 1540 mm.

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of the amount of liberated gas and the speed of gas liberation; the increase in concentration of manganese and carbon in steel results in diminishing intensity of gas liberation. (2) The amount of gas liberated during the solidification of 18-ton rimmed steel ingot, varied from 0.12 to 0.20 m^3/ ton. The amount of gas liberated per ton of steel does not depend on the weight of the ingot. (3) The composition of gas liberated during the solidification of ingots depends on oxygen content in steel. The crystallization of rimmed steel is accompanied mainly by the liberation of carbon monoxide (90 to 95%); the gas, liberated from the semi-killed steel, together with carbon monoxide, contains a considerable amount of hydrogen; the killed steel liberates mainly hydrogen. (4) The increased oxidation of rimmed steel has a small effect on the composition of liberated gas; it results in a small decrease of hydrogen content and a small increase of carbon dioxide content. (5) The rimming action in the molds proceeds at the expense of oxygen dissolved in steel as well as the oxygen of the

air, which oxidizes the surface of ingot metal during rimming action. Over 60% of admixtures, during the rimming action in the molds, burns out at the expense of oxygen of the air. There are 5 figures; 4 tables; and 7 Soviet references.

ASSOCIATION: Moscow Steel Institute (Moskovskiy institut stali)

SUBMITTED: July 23, 1959

S/148/60/000/011/005/015
A161/A030

AUTHORS: Kosterev, L. B.; Oyks, G.H.

TITLE: Impurities' segregation in solidifying 18-ton rimming steel ingots

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 11, 1960, 50 - 60

TEXT: The behaviour of carbon and oxygen was studied during the crystallization of 18-ton 08kp (08kp) and 03kp (03kp) steel(before the formation of the crust on the top) in open igot molds with a 1.13 m^2 cross section area and bottle ingot molds with an 0.15 m^2 opening. Steel was melted in basic open-hearth 220-ton furnaces and bottom-poured into the 2400 mm high ingot molds. An enclosed sampler with an aluminum spiral was used for sampling; the alumina content in samples was determined by S. N. Shkotova's method (Ref. 1, "Zavodskaya laboratoriya" 1937, No. 5). In 08kp steel the C content in the liquid ingot portion dropped at the end of the first crystallization stage, and in 03kp it rose. The maximum C content (above 0.11 %) in 08kp exceeded the concentration determined theo-

Card 1/4

Impurities' segregation in ....

retically by Hultgren and Phragmen (Ref. 2) in Fe-O-C system in open ingot molds, but the positive segregation in the bottle molds matched the theoretical calculations. In the bottle molds the C content increased during crystallization by 0.01 %, and in the open molds it dropped by 0.01 - 0.02%. It was stated that: 1) Carbon segregation in the bottle molds determined by the selective crystallization law, and its direction corresponds with the theoretical segregation in the Fe-O-C diagram; 2) In open molds additional oxidization by the air oxygen is combined with the selective crystallization law. The oxygen content and [%C] [%O] value were nearly at equilibrium already towards the end of filling in the bottle molds, and in the open molds equilibrium was reached considerably later on account of additional oxidization by air. The interaction of 08kp and 03 kp steel in open molds with air oxygen was different, due to the different carbon content and apparently due to the faster motion of C atoms to the reaction spot with a higher C content. But the oxidization of the surface intensifies the rimming and stirring of metal, and raises the intensity of oxidization of multiple metal waves. Beginning at a certain moment (before the filling end, or soon after the filling) the oxygen quantity, absorbed by the air,

exceeds the arrival rate of carbon atoms at the reaction surface, and the oxygen content in the metal begins to grow. About 10 - 15 min after filling, the oxygen content begins dropping as the liquid metal surface is diminishing. According to experiment data (Ref. 4, 5. S. Marshall, J. Chipman, Trans. Amer. Soc. for Metals, v. 30, 1942; G. Phragmen, B. Kalliny. Jernkontorets Annaler, v. 123, 1939), the [%C] [%O] value at 1550°C and the atmospheric CO pressure is approximately 0.0020 %. The formation of CO bubbles in metal becomes possible if the liberation pressure exceeds the outer pressure that is determined by the known N.N. Dobrokhotov's equation

$$P_{inner} = P_{atm} + h_{met}\gamma_{met} + \frac{2\sigma}{r} .$$

The maximum [%C] [%O] during rimming was 0.0032%, which corresponds to the CO liberation pressure of 0.0032 : 0.0020 = 1.60 atm; and the ferrostatic pressure of 0.6 atm corresponds to a liquid metal depth of 0.86 m. This means that at 0.86 m distance from the surface of the metal in the ingot mold and below it no CO bubbles can form. The rimming and the growth of honeycomb bubbles in the bottom ingot portion after the mold is filled,

S/148/61/000/011/003/018
E071/E180

AUTHORS: Kosterev, L.B., and Oyks, G.N.

TITLE: Non-metallic inclusions in 18-ton ingots of rimming steel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.11, 1961, 45-56

TEXT: Results of an investigation on the nature and distribution of non-metallic inclusions in bottom poured 18-ton ingots (730 x 1550/780 x 1590 mm, 2400 mm high) of rimming steel melted in 220-ton basic open hearth furnaces are described. Altogether 3 ingots were used for the investigation: 2 ingots from one cast (0.08% C, 0.42% Mn, 0.022% S, 0.030% O) teemed on a common stand, whereupon the second ingot was capped immediately after filling and a third ingot from another cast (0.08% C, 0.30% Mn, 0.028% S and 0.045% O) which was rather cold on teeming. 370-380 specimens (40 x 50 mm) were cut out from longitudinal sections and used for a metallographic study of non-metallic inclusions. The nature of non-metallic inclusions was determined

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by etching them with various reagents. In addition, microhardness measurements were carried out. The following main types of non-metallic inclusions were found: sulphides - a solid solution (MnFe)S, and the ferrous sulphide (FeS). Characteristic sulphide inclusions in the top part of ingots were ferrous sulphide grains and films along the grain boundaries. The size of inclusions of (MnFe)S situated in groups was 5-10 μ, of individual inclusions 20-40 μ. However, inclusions of the size of 70-100 μ were also encountered. The mean hardness of (MnFe)S inclusions, measured at a load of 20 g, was 287 kg/mm^2, and of FeS 319 kg/mm^2. Manganese and iron oxides - a solid solution (MnFe)O was encountered in the form of accumulations of a size up to 10 μ; in central parts of the ingots inclusions of 30-40 μ were encountered. In the steel with a high oxygen content, fused iron and manganese oxides fill the interaxial spaces of dendrites. Mean hardness - 405 kg/mm^2. Silicates - iron manganese silicates in the form of globules of various sizes, usually amorphous, but some crystalline inclusions were also encountered. In the majority of cases they contained also the oxide phase (MnFe)O, i.e.

forming two-phase inclusions with an excess of the oxide phase forming grains or dendrites. The silicate phase is not homogeneous, but consists of a fine grain eutectic containing small grains of the oxide phase. Size of these inclusions varied from 2-40μ to 100-200μ, occasionally 300μ. Mean hardness of silicates 721 kg/mm^2. Silicates formed the second largest group of inclusions. Oxysulphides: these two-phase inclusions form the largest group. They consist of a eutectic (MnFe)O - (MnFe)S and an excess oxide or sulphide phase. In the centre of the upper part of the ingots oxysulphide inclusions surround the boundaries of the primary grains of the metal. A majority of these inclusions are 20-50μ with an occasional 5-10μ in size. Inclusions consisting of oxides - sulphides - silicates: these inclusions were encountered for the first time in large ingots of rimming steel; their formation is probably promoted by prolonged presence of the liquid metal. The inclusions can contain separated individual oxides, sulphides and a eutectic oxide-sulphide silicate. The silicate phase separates in the form of plates, oxide in dendritic formations. The size of these

inclusions was 50-200μ. Complex oxide inclusions: encountered in the head part of the ingots. They fill shrinkage cavities and were seldom found in blow holes. MnO phase is predominant; it was probably brought into the metal from the slag during boiling. Alumina: was met in the form of small (below 10μ) crystals. Due to their high hardness these inclusions crumble out during polishing of the specimens. The distribution of inclusions is shown in Figs. 7 and 8. P.L. Konstantinova, V.P. Gamazov and M.I. Vaynshtok participated in the work.
There are 9 figures and 4 Soviet-bloc references.
ASSOCIATION: Moskovskiy instutut stali (Moscow Steel Institute)
SUBMITTED: August 7, 1961.

Caption to Fig.7. General distribution and particle size of inclusions. a) oxysulphides and b) silicates in the vertical cross-section of ingot no.1. I - boiling zone; II - central zone. ▨ below 30μ. ▩ 30-50μ. ■ above 50μ.

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S/148/61/000/009/003/012
E071/E135

AUTHORS: Kosterev, L.B., and Oyks, G.N.

TITLE: The mechanism of segregation of admixtures in 18 ton ingots of rimming and semikilled steel

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 4 no.9, 1961, 59-70

TEXT: An investigation of the chemical non-uniformity was carried out on: four 18 ton ingots of low carbon steel; two ingots of rimming steel one of which crystallised under free boiling conditions (it was covered with the cast iron top after 26 min), the second ingot was solidified under the cover which was lowered into the metal immediately after the end of filling; one ingot of semikilled steel (150 g/t of aluminium was added to the metal stream during teeming); and one ingot of killed steel (aluminium rod 1 kg/ton suspended in the mould). The structure of the ingots and their chemical non-uniformity were determined on longitudinal axial templets, sulphur prints and samples of metal taken on the levels 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 40, 50, 60, 70, 80, 83, 86, 89, 92, 95 and 98% of the height counting

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from the top of the ingots. Eight samples of metal (50 mm apart) were taken at each level and on the level 24% every 5 mm. The distribution of sulphur was found to be similar to that in small and medium ingots of rimming steel; the concentration of sulphur in the metal increases from the surface to the centre and from the bottom to the head of the ingot. A specific feature of the distribution of sulphur in large ingots of rimming steel is Λ-shaped segregation which is also characteristic for killed steel. A V-shaped distribution of sulphur was observed in the bottom part of the ingots, i.e. shrinkage takes place there at the end of the solidification similar to that in ingots of killed steel. The distribution of carbon was basically similar to that of sulphur, but was less pronounced. The segregation of phosphorous was even less pronounced. It was established that the oxidation of manganese takes place during the boiling of the metal in moulds. To check the existing views on the role of boiling on the development of segregation of admixtures, samples of the metal were taken during the process of boiling with closed sampling tubes immersed 200 and 2000 mm into the moulds. During the boiling, the two samples, which were taken nearly

simultaneously, differed little in the concentration of the segregating elements. Thus it can be concluded that the accumulation of admixtures in the top part of the ingots takes place at the last stage of the crystallisation of the middle part of the ingots, and not during the formation of the boiling zone. A comparison of the influence of the duration of boiling on the maximum degree of segregation showed that segregation decreases with increasing duration of the boiling period. However, this method cannot be used for reducing the degree of segregation since simultaneously the structure of the top of the ingot deteriorates, which leads to larger metal losses. In semikilled steel chemical non-uniformity is considerably smaller and the structure of the head of the ingot without a clearly defined shrinkage cavity is superior to that of rimming steel. A thickness of a good quality skin of 10-12 mm is sufficient for the production of sheets. The average yield of slabs from this steel was 89%. It is considered that the production of semikilled steel instead of rimming steel would be an efficient method of improving the quality and the yield of large ingots.

L 45219-65 EWT(m)/EWP(z)/EWA(c)/T/EWP(b)/EWA(d)/EWP(t) MJW/JD
ACCESSION NR: AP5008386 S/0148/65/000/003/0053/0058

AUTHOR: Vinnichenko, Ye. V.; Kosterev, L. B.; Yavoyskiy, V. I.; Danilin, V. I.; Selivanov, V. M.; Fedan, A. T.

37
26
B

TITLE: Experiments with molten slag degassing of steel

SOURCE: IVUZ. Chernaya metallurgiya, no. 3, 1965, 53-58

TOPIC TAGS: degassing, slag, chromium steel

ABSTRACT: Degassing experiments done on four grades of steel: 1Kh13, Kh17, Kh23N18 and Kh23N13. A low-viscosity basic synthetic slag was prepared in an electric furnace and mixed with the steel in an intermediate vessel before teeming. Melt temperatures, gas content, and slag chemical composition were checked during the process. It was found that with properly prepared slag and good contact of slag and metal the original hydrogen content of the metal may be reduced by 20-30%. Another index of degassing is the hydrogen content of the slag at the start of refinement. Several concomitant mechanisms for degassing are adduced including the volatilization of *HF*. At some distance from the electrode, it is possible that the reverse process occurs, i.e. the solution of hydrogen in slag, but the dominant pro-

Card 1/2

L 45219-65
ACCESSION NR: AP5008386

cess is the desorption of hydrogen, particularly desorption at the electrode. The regular relationship between the absolute lowering of hydrogen content and the gas saturation of steel when the temperature of the refining slag is above 1340°C is shown. Simultaneous investigations of the nitrogen content in the metal showed that while some titanium nitrides do adhere to coarse inclusions in the slag, the use of molten slag for degassing does not reduce the nitrogen content of the steel. "M. M. Kulkova, L. T. Shepel', I. N. Zimina, K. V. Belyakova, A. S. Spirin and A. F. Sen'kin participated in the work." Orig. art. has: 4 figures, 2 tables, 5 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys); Metallurgicheskiy zavod "Krasnyy Oktyabr'" (Krasnyy Oktyabr' Metallurgical Plant)

SUBMITTED: 16Nov64 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 003

BJR

Card 2/2

ACC NR: AR6000076 UR/0275/65/000/009/V027/V027

AUTHOR: Kosterev, N.V.

TITLE: A semiconductor voltage stabilizer for a KPI d-c analog computer

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 9V210

REF. SOURCE: Vestn. Kiyevsk. politekhn. in-ta. Ser. Elektroenerg., No.1, 1964. 124-126

TOPIC TAGS: voltage stabilizer, semiconductor device, analog computer/ KPI analog computer

ABSTRACT: The Kiev Polytechnic Institute has developed a d-c semiconductor stabilizer with an output voltage of 18 v and current of 400 ma. The stabilizer schematic consists of a PT series-connected two-element regulator (PChD and P16B), a single-stage d-c amplifier (P16B), and a silicon stabilitron tube (D809) as reference-voltage supply. Since the d-c amplifier is supplied with unstabilized voltage, use is made of a stabilizing connection between the input voltage and the d-c amplifier input for greater stability during voltage changes.

Card 1/2 UDC: 621.316.722.1

ACC NR: AR6000076

When the line voltage changes from 190 to 250 v, the output voltage does not vary by more than ± 4v. S.D.

SUB CODE: 09

Card 2/2

L 01845-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6000076 SOURCE CODE: UR/0275/65/000/009/V027/V027

56
B

AUTHOR: Kosterev, N. V.

TITLE: Semiconductor voltage stabilizer for a d-c model of the Kiev Polytechnic Institute

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 9V210

REF SOURCE: Vestn. Kiyevsk. politekhn. in-ta. Ser. Elektroenerg., No. 1, 1964, 124-126

TOPIC TAGS: semiconductor device, voltage stabilizer, semiconductor, twin transistor, dc amplifier, avalanche diode

ABSTRACT: A semiconductor d-c voltage stabilizer with an output voltage of 18 v and a load current of 400 mamp has been developed at the Kiev Polytechnic Institute for the power supply of a d-c model. The stabilizer uses a circuit with a series composite regulating twin-transistor (PChD and P16B), a 1-stage d-c amplifier (P16B), and a silicon avalanche diode (D809) as the source of reference voltage. As the d-c amplifier is fed unstabilized output voltage, stabilizing parametric coupling between the input voltage and the d-c current amplifier is used for improv-

Card 1/2 UDC: 621.316.722.1

L 01845-67

ACC NR: AR6000076

ing circuit stability during variations in voltage. When the circuit voltage varies within 190—250 v, the output voltage varies by not more than ± 0.4 v. [Translation of abstract]

[DW]

SUB CODE: 09/

Card 2/2 fv

ANTOSHIN, Ye V

25(5) p 3 PHASE I BOOK EXPLOITATION SOV/1361

Spravochnik mekhanika mashinostroitel'nogo zavoda v dvukh tomakh. t. 2: Tekhnologiya remonta (Handbook for Mechanics of Machine-building Plants in Two Volumes. Vol. 2: Technology of Repair Operations) Moscow, Mashgiz, 1958. vii, 1059 p. 40,000 copies printed.

Resp. Ed.: Yu.S. Borisov, Engineer; Ed.: K.G. Tsopin, Engineer; Tech. Ed.: T.F. Sokolova; Eds. of Set: Yu.S. Borisov, Engineer, A.P. Vladziyevskiy, Doctor of Technical Sciences, and R.A. Roskin, Candidate of Technical Sciences; Managing Ed. for Reference Literature (Mashgiz): V.I. Krylov, Engineer.

PURPOSE: This handbook is intended for personnel responsible for repair and maintenance operations in a machinery-manufacturing plant.

COVERAGE: The handbook contains information pertinent to the organization of repair and maintenance operations, design-preparation of maintenance work, and economics of maintenance. Information on scientific research organizations and plants participating in preparation of this volume is included in the coverage of Volume 1 (SOV/1359). There are no references. Basic topics covered include reconditioning and making of parts in maintenance operations; metal-working, hoisting, and pipe-fitting; finishing operations involved in maintenance work; checking parts for precision; basic bench and assembly work; maintenance of power equipment; and maintenance of foundations.

Card 5/ 26

Handbook for Mechanics (Cont.) SOV/1361

L 06342-67 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AP6030323 (A,N) SOURCE CODE: UR/0153/66/009/003/0476/0479

AUTHOR: Bykov, A. N.; Kostereva, A. N.; Mizerovskiy, L. N. 54 13

ORG: Department of Chemical Fibers and Plastics, Ivanovo Chemical Engineering Institute (Kafedra khimicheskikh volokon i plastmass, Ivanovskiy khimiko-tekhnologicheskiy institut)

TITLE: Study of the thermal stability of colored polycaprolactams

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 3, 1966, 476-479

TOPIC TAGS: polycaprolactam, polyamide, dye chemical, polymer degradation, thermal degradation, polymer heat resistance, THERMAL STABILITY

ABSTRACT: The paper deals with the thermal-oxidative degradation at 160°C of colored polycaprolactams obtained by polymerizing caprolactam in the presence of the dyes α-aminoanthraquinone, 1,5-diaminoanthraquinone and 3-amino-6,7-phthaloylcarbazole, introduced in the amount of 1% of the weight of the caprolactam. A Kapron resin stabilized with acetic acid and a colorless resin without stabilizer were also subjected to the heat treatment. The stabilized and unstabilized colorless and colored polycaprolactams showed different resistances to high temperature and atmospheric oxygen. The highest thermal stability was exhibited by colored polycaprolactams in which the dye enters into the polyamide chain. Polyamides dyed in the bulk showed a higher thermal stability than colorless Kapron, but they were less stable than colored poly-

Card 1/2 UDC: 678.675.01:019.32

L 06342-67

ACC NR: AP6030323

caprolactams. As indicated by spectrophotometric curves, thermal treatment of colored polycaprolactams for 6 hr at 160°C does not cause the dye to separate chemically from the polycaprolactam chain. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11/ SUBM DATE: 28Sep64/ ORIG REF: 008

Card 2/2 hlc

N.F. KOSTAREVA

24(7) PHASE I BOOK EXPLOITATION SOV/1700

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) [Lvov] Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gaser; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

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Materials of the 10th All-Union Conference (Cont.) SOV/1700

Karabash, A.G., Sh.I. Peyzulayev, R.L. Slyusareva, M.P. Sotnikova, N.I. Smirnova-Averina, Z.N. Samsonova, L.S. Kraus, G.G. Morozova, L.S. Romanovich, I.I. Smirenkina, V.N. Lipatova, S.K. Sazanova, L.I. Pogacheva, V.F. Nasheva, Ye.F. Voronova, P.D. Gorbachev, F.A. Kostareva, N.T. Kostareva, A.I. Yeloratskaya, and N.N. Kuznetsova. Methods of Spectrochemical Analysis of Pure Metal for Impurities 556

AVAILABLE: Library of Congress

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7-7-59

Card 31/31

KOSTEREVA, T.N.

Solution of problems of industrial nature in physics. Fiz. v shkole 13 no.5:74-76 S-O '53. (MLRA 6:8)

1. Pedinstitut, g. Stalinsk Kemerovskoy obl.
(Physics--Problems, exercises, etc.)

GORNOSTAYEV, M.Ye.; KLIMOV, M.A., laberant; REMIZOV, A.A.; KOSTEREVA, T.N.

Useful advices. Fiz. v shkole 18 no.6:64-65 N-D '58. (MIRA 11:12)

1.48-ya shkola g. Stalingrada (for Gornostayev). 2.Srednyaya shkola st. Maledel'skoy Stalingradskoy oblasti (for Klimov). 3.35-ya shkola g. Krasnodara (for Remizov). 4.Stalinskiy pedinstitut Kemerovskoy oblasti (for Kostereva).
(Physics--Study and teaching)

MISHUKOV, F.A.; FOMIN, S.F.; KOSTERIN, A.A.

Centrifugal casting of linear blanks. Lit. proizv. no.8:34-35 Ag '63. (MIRA 16:10)

AUTHORS: Kosterin, A. V., Zuyev, V. N., Shevaleyevskiy, I. D. 7-1-9/12

TITLE: On the Zr-Hf Ratio in the Zircons of Some Igneous Rocks of North Kirghizia (Ob otnoshenii Zr/Hf v tsirkonakh nekotorykh izverzhennykh porod severnoy kirgizii)

PERIODICAL: Geokhimiya, 1958, Nr 1, pp. 86-89 (USSR)

ABSTRACT: In the rocks of the acidic series zirconium, and together with it hafnium, is almost only found as zircon. Thus the Zr-Hf ratio of the zircon can be taken as that of the rock. This ratio depends on the origin. The igneous rocks of the southern slope of the Zailiyskiy Alatau were investigated because there all types from gabbros to alaskite granites are found. According to Tikhomirov, Luyk and others the rocks of this region were formed in the following sequence:
1) Proterozoic cycle, gneissoid alaskite granites;
2) Caledonian cycle, gabbro, diorites, granodiorites, porphyroid biotite hornblende granites;
3) Varistic cycle, rose-colored biotite hornblende granites, syenites, alaskite granites;
There is a genetic connection between the Varistic alaskite

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On the Zr-Hf Ratio in the Zircons of Some Igneous Rocks of North Kirghizia 7-1-9/12

granites and zircon-bearing hydrothermal veins.

The Zr-Hf ratio of the different rocks and of the hydrothermal veins was determined by X-ray analysis: the relative error of the ratio was 5%. The data are given in a table, and besides are shown in a diagram.

The investigations have shown:

1) In the zircons of the Varistic and Proterozoic alaskite granites the Zr-Hf ratio is equal and amounts to 36.
2) In differentiation this ratio is changed according to certain laws from 71 in the gabbro to 36 in the alaskites and 29 in the corresponding hydrothermal veins;
3) In zircons of rocks of the same compounds certain variations in the ratio were stated. With that an overlapping of the Zr-Hf ratio of rocks of different compounds was observed, but these rocks are placed closely together in the series of magmatic differentiation. There are 1 figure, 1 table, and 4 references, 3 of which are Slavic.

ASSOCIATION: Institute for Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AN USSR, Moscow (Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva)

On the Zr-Hf Ratio in the Zircons of Some Igneous Rocks of North Kirghizia 7-1-9/12

SUBMITTED: October 1o, 1957

AVAILABLE: Library of Congress

1. Rock-Analysis

Card 3/3

ZUYEV, V.N.; KOSTERIN, A.V.

Fluocerite from deposits of Central Asia. Trudy Inst. min., geokhim. i kristallokhim. red. elem. no. 3:151-153 '59.
(MIRA 14:5)
(Soviet Central Asia—Fluocerite)

SOV/7-59-4-2/9

3(8)

AUTHOR: Kosterin, A. V.

TITLE: On Possible Transportation Forms of Rare-Earth Elements by Hydrothermal Solutions (O vozmozhnykh formakh perenosa redkozemel'nykh elementov gidrotermal'nymi rastvorami)

PERIODICAL: Geokhimiya, 1959, Nr 4, pp 310 - 315 (USSR)

ABSTRACT: The transportation possibilities of TR in the hydrothermal range were investigated on the basis of physico-chemical and geochemical data from publications. Only complexes with carbonate, fluoride and sulfate are suitable for transportation. Most frequently the complex $[TR(CO_3)_3]^{3-}$ will occur; only in deposits rich in barite also double salts with sulfate ion may be expected. Fluoride complexes can only be of little importance since in this case a considerable excess of Fe^{3+}, Al^{3+}, Zr^{4+} and other ions above TR had to be present in the solution. The hydrothermal minerals of the rare earths are mainly formed by precipitation from carbonate solution. The reasons for it can be the following: 1) Pressure decrease after filling of pore spaces and cracks by the solution.

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2) Decrease in alkalinity of the solution by reaction of Na^+ and K^+ with the adjacent rock. 3) Removal of the carbonate ion by precipitation in the form of calcite, siderite, and other carbonates. The yttrium earths form considerably more stable carbonate and sulfate complexes than the ceria earths (Table). This causes a relative concentration of the yttrium earths over the ceria earths in the hydrothermal solutions. By precipitation of minerals of the ceria earths this process is accelerated, by precipitation of yttrium minerals it is retarded or even inverted. There are 1 table and 15 references, 4 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, AS USSR, Moscow)

SUBMITTED: December 29, 1958

KOSTERIN, A.V.; SHEVALEYEVSKIY, I.D.; RYBALOVA, E.K.

The Zn/Hf ratio in zircons of some igneous rocks on the northern slope of the Kurama Range. Geokhimiia no.5:451-454 '60. (MIRA 13:8)

1. Far East Branch of the Academy of Sciences, U.S.S.R.
(Kurama Range—Rocks, Igneous) (Zirconium) (Hafnium)

KOSTERIN, A.V.; KIZYURA, V. Ye.; ZUYEV, V.N.

The ratio of rare earth elements in orthites of some igneous rocks of northern Kirghizistan. Geokhimiia no.5:454-456 '61. (MIRA 14:5)

1. Dal'nevostochnyy geologicheskiy institut Sibirskogo otdeleniya AN SSSR, Vladivostok.
(Trans-Ili Ala-Tau--Allanite)
(Rare earth metals)

KOSTERIN, A.V.

PHASE I BOOK EXPLOITATION SOV/5740

Akademiya nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov

Voprosy mineralogii, geokhimii i genezisa mestorozhdeniy redkikh elementov (Problems in Mineralogy, Geochemistry, and Deposit Formation of Rare Elements) Moscow, Izd-vo AN SSSR, 1960. 253 p. (Series: Its: Trudy, vyp. 4) Errata printed on the inside of back cover. 2,200 copies printed.

Chief Ed.: K. A. Vlasov, Corresponding Member, Academy of Sciences USSR;
Resp. Ed.: V. V. Lyakhovich; Ed. of Publishing House: L. S. Tarasov;
Tech. Ed.: P. S. Kashina.

PURPOSE: This book is intended for geologists, mineralogists, and petrographers.

COVERAGE: This is a collection of 23 articles on the formation, geology, mineralogy, petrography, and geochemistry of deposits of rare elements in Siberia and [Soviet] Central Asia. The distribution and characteristics of rare elements found in these areas as well as some quantitative and qualitative methods of investigating the rocks and minerals in which they are found,

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Problems in Mineralogy (Cont.) SOV/5740

or with which they are associated, are discussed. Two articles present an economic investigation of the possibilities of industrial extraction and utilization of selenium, tellurium, and hafnium. No personalities are mentioned. Each article is accompanied by references.

TABLE OF CONTENTS:

GEOCHEMISTRY

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Problems in Mineralogy (Cont.) SOV/5740

MINERALOGY AND PETROGRAPHY

Card 3/6

Card 6/6

JA/dwm/mas
11-14-61

KOSTERIN, A.V.; ALEKHINA, K.N.; KIZYURA, V.Ye.

Monazite of an unusual genesis. Soob.DVFAN SSSR no. 15:23-26 '62.
(MIRA 17:9)

1. Dal'nevostochnyy filial imeni Komarova Sibirskogo otdeleniya AN SSSR.

KOSTERIN, A.V.; ZUYEV, V.N.

Hydrothermal huttonite. Zap. Vses. min. ob-va 91 no.1:99-102 '62. (MIRA 15:3)

(Huttonite)

KOSTERIN, A.V.; KOROLEV, D.F.; KIZYURA, V.Ye.

Rare earths in the Chekhezskoye brown coal deposit. Geokhimia no.7:694-695 Jl '63. (MIRA 16:9)

1. Dal'nevostochnyy geologicheskiy institut Dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR, Vladivostok.
(Ussuriysk region--Rare earths)

ACCESSION NR: AR4033708 S/0081/64/000/003/E053/E053

SOURCE: Referativny*y zhurnal. Khimiya, Abs. 3E60

AUTHOR: Kosterin, A. V.

TITLE: Geochemical peculiarities of the elements in the pairs zirconium - hafnium and niobium - tantalum

CITED SOURCE: Soobshch. Dal'nevost. fil. Siv. otd. AN SSSR., vy*p. 18, 1963, 17-21

TOPIC TAGS: geochemistry, zirconium, hafnium, niobium, tantalum, ionization potential, magmatic differentiation, hydrothermal stage

ABSTRACT: An analysis of material in the literature leads to the conclusion that the ratio of the elements in the pairs Zr - Hf and Nb - Ta results from the difference in the ionization potentials of these elements. The difference in atomic weights plays a lesser role. In the course of magmatic differentiation, accumulation of elements with lesser ionization potentials takes place in the melt: Hf with respect to Zr, and Ta with respect to Nb. During the hydrothermal stage elements with greater ionization potentials accumulate since they more readily form complexes and their salts are more soluble.

Card 1/1 DATE ACQ: 02Apr64 SUB CODE: CH, AS ENCL: 00

KOSTERIN, A.V.

Geochemical particularities of elements in zirconium-hafnium and niobium-tantalum pairs. Soob. DVFAN SSSR no.18:17-21 '63. (MIRA 17:11)

1. Dal'nevostochnyy geologicheskiy institut Dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR.

KOSTERIN, A.V.; ALEKHINA, K.N.; KIZYURA, V.Ye.

Churchite from the Maritime Territory. Zap. Vses. min. ob-va 92 no.6:720-722 '63. (MIRA 18:3)

KOSTERIN, A.V.

Geochemical studies during heavy-concentrate prospecting. Geol. i geofiz. no.9:123-126 '64. (MIRA 18:7)

1. Dal'nevostochnyy geologicheskiy institut Sibirskogo otdeleniya AN SSSR, Vladivostok.

Kosterin, E.V.

124-58-6-7019D

Translation from: Referativnyy zhurnal, Mekhanika 1958, Nr 6, p 107 (USSR)

AUTHOR: Kosterin, E. V.

TITLE: The Shear Deformation of Argillaceous Soils With Allowance for Creep Phenomena (Deformatsii sdviga glinistykh gruntov s uchetom yavleniy polzuchesti)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Mosk. inzh.-stroit. in-t (Moscow Institute of Structural Engineering), Moscow, 1957

ASSOCIATION: Mosk. inzh.-stroit. in-t (Moscow Institute of Structural Engineering), Moscow

1. Soils--Deformation 2. Soils--Creep

Card 1/1

KOSTERIN, E.V.

Some experimental results on the direct measurement of stress relaxation in clayey soils. Izv. AN SSSR. Otd. tekh. nauk no.4:133-136 Ap '57.
(Soil mechanics) (MLRA 10:6)

KOSTERIN, E. V.

AUTHOR: Kosterin, E.V., Engineer 98-7-10/20

TITLE: Methods for Establishing Resistance in the Displacement of Clay Soils (K metodike opredeleniya soprotivleniya sdvigu glinistykh gruntov)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1957, No 7, pp 37-41 (USSR)

ABSTRACT: To examine the results of shearing forces and applied pressure 140 experiments were conducted with various clays with disturbed and undisturbed structures. Exact tests were carried out with clays from the Kudinovsk area, as well as with Jurassic clays and clays from the Podolsk area. The shearing action of displacements was studied with the aid of markers. (It was found that generally the displacing force is transmitted to the test piece on the side surfaces and over the horizontal layers). The tangential force cannot exceed the limiting frictional force exerted on the contacting surface, between the test piece and the bottom of the appartus. Special tests were conducted in order to establish the limiting frictional forces, which showed that at normal and light loads with low limiting frictional forces, displacing forces were transmitted onto the side surfaces of test pieces. An increase in normal load caused

Card 1/3

an increase in the tangential forces. Analyses of cross sections showed that displacement at low normal loads took place on a sloping surface. A slanted cross section was obtained in Kudinovsk clays of undisturbed structure with a normal pressure of 1.1 kg/sq cm, whereby samples with disturbed structures showed a slanted cross section of 0.1 kg/sq cm. At present, great attention is being paid to the studies of the creepage of clays under shearing actions. Generally, tests of protracted shifts were conducted with shearing apparatuses. The most important thing here is to keep a constant speed while cutting through the cross section of the test piece. Tests have shown that a higher degree of evenness can be obtained by decreasing the height of the test piece 10 to 15 mm, and by testing with normal loads. It was established that the results of displacement tests with shearing devices depended on the condition of the transmission of the shifting force onto the test piece. For every type of soil, normal load capacities exist, for which the apparatus indicates the actual shift. This loading capacity depends on the stability of the test piece, and rises

Card 2/3

AUTHOR: Kosterin, E.V., Engineer SOV/99-58-11-5/9

TITLE: Approximate Method of Calculating the Horizontal Displacements of Supporting Structures on Clayey Foundations Subjected to Creep (Priblizhennyy metod raschëta gorizontal'nykh smeshcheniy podpornykh sooruzheniy na glinistykh gruntakh s uchëtom polzuchesti)

PERIODICAL: Gidrotekhnika i melioratsiya, 1958, Nr 11, pp 31 - 37 (USSR)

ABSTRACT: The article deals with the problem of determining the horizontal displacement of supporting structures to establish a practical procedure of calculation. The proposed method of calculation is based on applying the theory of elasticity for determining the stress in the ground, possessing the characteristics of creep. The author proposes the analytical method to calculate the displacement of the center of the building base. The rigorous formula is substituted by the approximate formula for reasons of difficulties of exact integration:

$$S = K \cdot b \cdot \left[\frac{1}{G_M} \sum_{i=1}^{n} q_i + \sum_{i=1}^{n} q_i \omega (t - t_i) \right],$$

Card 1/3

Approximate Method of Calculating the Horizontal Displacements of Supporting Structures on Clayey Foundations Subjected to Creep

where: t- the time from the moment of the first step of applying the load; t_1- the time from the moment of applying the first step of the load till the moment of applying the i-step; q_1- the value of the step; q- the horizontal load uniformly distributed in the plain of the base; b- the width of the area; K- arctg; W- the creep step. The author presents the results of the computation in tabular form for 1 particular example. He arrives at the following conclusion: 1) when calculating the horizontal displacements of supported structures erected on clayey ground the phenomenon of creep has to be considered; 2) the proposed method of approximate calculation establishes the non-

simultanity of applying horizontal loads, multi-strata formation of foundations, and non-linearity of the creep; 3) the data required for computation can be obtained by laboratory tests. There are 4 graphs and 2 tables.

TSYTOVICH, N.A., prof.; VESHLOV, V.A., dotsent, kand.tekhn.nauk; KUZ'MIN, P.G., dotsent, kand.tekhn.nauk; FERRONSKIY, V.I., kand.tekhn. nauk, assistent; PILYUGIN, A.I., kand.tekhn.nauk, assistent; LUGA, A.A., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; SOKOLOV, N.M., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; SAVINOV, O.A., doktor tekhn.nauk; KOSTERIN, E.V., kand.tekhn.nauk, assistent. Prinimali uchastiye: AKINSHIN, V.M.; MARTSENYUK, V.I., starshiy laborant. VASIL'YEV, B.D., prof., doktor tekhn.nauk, retsenzent; BEREZANTSEV, V.G., prof., doktor tekhn.nauk, retsenzent; LAGAR'KOV, N.I., inzh., nauchnyy red.; SMIRNOVA, A.P., red.izd-va; NAUMOVA, G.D., tekhn.red.

[Foundation engineering] Osnovaniia i fundamenty. Pod red. N.A. TSytovicha. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 452 p. (MIRA 13:5)

1. Chlen-korrespondent AN SSSR (for TSytovich). 2. Zaveduyushchiy laboratoriyey kafedry osnovaniy i fundamentov Moskovskogo inzhenerno-stroitel'nogo instituta imeni V.V.Kuybyshava (for Akinshin). 3. Zaveduyushchiy kafedroy osnovaniy i fundamentov Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta imeni akademika V.N.Obraztsova (for Berezantsev).

(Foundations) (Soil mechanics)

KOSTERIN, B.V. (Omsk)

Designing high grillage foundations of bridges with vertical piles. Osn., fund.i mekh.grun. 2 no.3:21-22 '60. (MIRA 13:7)
(Bridges--Foundations and piers)

KOSTERIN, E.V., kand.tekhn.nauk

Determining stresses in roadbed foundations. Avt. dor. 23 no.10: 29-30 O '60. (MIRA 13:10)
(Roads--Design)

KOSTERIN, E.V.

Reducing the work required to design high pile gratings of bridge supports. Izv.vys.ucheb.zav.; stroi. i arkhit. 4 no. 33-39 '61. (MIRA 15:2)

1. Sibirskiy avtomobil'no-dorozhnyy institut imeni V.V. Kuybysheva.
(Piling (Civil engineering))

KOSTERIN, E.V.

Calculations for annular and round pile foundations. Osn., fund. i mekh. grun. 4 no.6:17-21 '62. (MIRA 16:1)
(Foundations)

KOSTERIN, I.; MALANCHUK, A.

For a communist attitude toward labor. Den.i kred. 18 no.11: 44-46 N'60. (MIRA 13:11)

1. Nachal'nik sektora perescheta vyruchki Leningradskoy gorodskoy kontroy Gosbanka (for Kosterin). 2. Sekretar' partbyuro Komsomol'skogo otdeleniya Gosbanka (for Malanchuk). (Banks and banking) (Socialist competition)

KOSTERIN, I. S.

PERIODICAL ABSTRACTS

Sub.: USSR/Engineering AID 4151 - P

KOSTERIN, I. S., B. I. SHEYNIN, and A. K. KATARZHIS
OPYTNYYE KHARAKTERISTIKI RAZDELENNOGO TECHENIYA PAROVODYANOY SMESI V PRYAMOY GORIZONTAL'NOY TRUBE (Experimental data on the divided flow of steam-water mixture in a straight horizontal conduit). Teploenergetika, no. 1, Ja 1956: 22-26.

Research on mixed steam and water flow under a 120 atm pressure made at the high pressure heat and power plant no. 9 is reported. The experimental hydrodynamic installation is described in detail. The different flow combinations are presented with diagrams. Tests reportedly established flow velocity for given atm pressures.

KOSTERIN, M.

Elektrooborudovanie avtomobilia IAAZ-200. /Electric equipment of the automobile make IAAZ-200/. (Avtomobil', 1950, no. 1, p. 15-20, diagrs.).
DLC: TL4.A87

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

KOSTERIN, M., inzh.

New system of electric equipment for diesel trucks. Avt.transp. 40 no.1:39-40 Ja '62. (MIRA 15:1)
(Motortrucks--Electric equipment)

KOSTERIN, Sergey Ivanovich DECEASED 1964
1905-1963

Heat Transfer
Turbulent air

KOSTERIN, V.; KOSTIN, A.

Improve loading and unloading operations. Rech. transp. 22 no.5:21-23 My '63. (MIRA 16:8)

1. Zamestitel' nachal'nika Volzhskogo on"yedinennogo parokhodstva (for Kosterin).

(Cargo handling--Equipment and supplies)

3.2100

81764
S/035/60/000/02/06/009

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 2, p. 78, # 1621

AUTHOR: Kosterin, V. A.

TITLE: Visual Photometer for Observations of Artificial Earth Satellites

PERIODICAL: Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli, 1959, No. 4, pp. 8-9, (Engl. summary)

TEXT: The photometer is made of field glasses. A diaphragm with small apertures is placed in the focal plane of one of the field glasses lens. The lens is illuminated by a small electric bulb from the side of the ocular. The ocular of this half of the field glasses is a condenser, and the lens is a collimator. The light from the collimator is directed to the lens of the other "operating" half of the field glasses with the aid of two small prisms of total internal reflection. The prisms are fixed in front of the field glasses lenses. Artificial satellites as well as celestial bodies are to be observed through this "operating" half of the field glasses.

A. M. L.

Card 1/1 Saratovskaya stantsiya nablyudeniy iskusstvennykh sputnikov Zemli

26.1150

25909

S/123/61/000/013/023/025
A052/A101

AUTHOR: Kosterin, V. A.

TITLE: On calculating characteristics of the gas-turbine engine at tapping and by-passing air from compressor into jet nozzle

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1961, 27, abstract 13I188 ("Tr. Kazansk. aviats. in-ta", 1960, no. 55, 31-46)

TEXT: An equation is derived for the line of combined operation of the compressor and turbine for the turboramjet with the tap of air from the compressor (for cabin pressurization, blowing off the boundary layer, etc.), and also with the by-pass of air into the nozzle. The equation is derived on the assumption that the air temperature behind the compressor is equal to the gas temperature behind the turbine. It is pointed out that the steeper the compressor characteristic, the higher π_c and the lower the gas temperature and efficiency of the compressor and turbine, - the sharper the drop of the thrust and the higher the specific fuel consumption at the air tapping. To evaluate the change of the thrust and efficiency of the turboramjet when tapping and by-passing air, the author uses the method of small deviations and linearization of the calculation

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Card 2/2

KOSTERIN, V.A.; TINCHURIN, F.Z.

Gas-turbine system for air blowing into a blast furnace. Trudy KAI no.70:87-96 '62. (MIRA 18:4)

L 21492-66 EWT(d)/EWT(l)/EWT(m)/T-2/EWP(f) JD/JXT(cz)

ACC NR: AT6007557 SOURCE CODE: UR/2529/63/000/076/0050/0062

AUTHOR: Kosterin, V. A.

ORG: none

TITLE: Evaluation of afterburners in turbojet engines

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 76, 1963. Aviatsionnyye dvigateli (Aircraft engines), 50-62

TOPIC TAGS: afterburner, jet engine, combustion, jet aircraft

ABSTRACT: An analysis was made to determine the characteristics of three different turbojet afterburner systems. In the first system, a small amount of air is withdrawn behind the compressor, mixed with part of the fuel used for thrust augmentation, and the mixture is injected behind the turbine into the jet duct where it burns without stabilizers. In the second system, gas dynamic stabilization is used, i.e., bypassed air is injected in the transverse direction to form stabilizing recirculation zones. In the third system, conventional bluff bodies are used as stabilizers. Formulas were derived for calculating engine efficiency and the losses in the three types of afterburners. It was found that the improvement in engine efficiency by the bypassing of air depends on the compressor characteristics and the operating regimes. Afterburners one and two give a 2.5—3% higher engine efficiency than the third afterburner when the engine is operated without thrust augmentation. Orig. art. has: 9 formulas and 7 figures. [PV]

Card 1/2

ACCESSION NR: AP4033047 S/0147/64/000/001/0112/0121

AUTHOR: Kosterin, V. A.; Rzhevskiy, Ye. V.

TITLE: Calculation of the trajectory and range of fan and twin plane jets in a limited transverse flow

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 1, 1964, 112-121

TOPIC TAGS: aerodynamics, fan jet, twin plane jet, jet flow, transverse flow, air jet trajectory, air jet range

ABSTRACT: The paper presents a theoretical solution of the problem of the form of the center line of fan and twin plane jets in a homogeneous, drifting flow, limited by walls. Together with the calculation of the jet form, the question of the range of the jets in a transverse flow is also solved. As a particular case of the general solution, derived for a limited flow, a free flow solution is found. Values of constant coefficient are determined by comparison with experimental data. The following calculation scheme was adopted on the basis of an analysis of flow peculiarities: 1) the fan (or twin plane) jets do not intermingle with the transverse drifting flow; 2) expansion of gasses in the peripheral (or plane) nozzle is complete; 3) affecting the internal and external surfaces of the jet are, in addition to the forces of pressure, forces

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ACCESSION NR: AP4040973 S/0147/64/000/002/0068/0080

AUTHOR: Rzhevskiy, Ye. V.; Kosterin, V. A.

TITLE: Experimental study of the propagation of fan-shaped and double plane jets in a transverse flow

SOURCE: IVUZ. Aviatsionnaye tekhnika, no. 2, 1964, 68-80

TOPIC TAGS: gas jet, jet propagation, fan shaped jet, plane jet, double plane jet, transverse flow, subsonic flow, supersonic flow, isothermal flow, turbulent jet

ABSTRACT: The propagation of fan-shaped and double plane jets in a subsonic transverse flow was studied photographically in a special apparatus equipped with a device for flow visualization with aluminum powder. Trajectories and penetration ranges of the two types of jets in free and confined transverse flows were determined as functions of various parameters. The results showed that both the trajectory and the range of subsonic and supersonic fan-shaped and double plane jets in a subsonic transverse flow under the conditions studied are determined by the hydrodynamic parameter $\bar{q}_v = \rho_v V_0^2/\rho_w W_0^2$ (where ρ_v is the gas density of the jet, V_0 is the initial jet velocity, ρ_w is the

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L 23325-66 EWT(1)/EWP(m)/EWT(m)/T/ETC(m)-6/EWA(1) WW/JW/WE

ACC NR: AP6011794 SOURCE CODE: UR/0147/66/000/001/0130/0139

AUTHOR: Kosterin, V. A.; Rzhevskiy, Ye. V.; Khismatullin, A. Ya.

ORG: none

TITLE: Some problems of the gas dynamics of jets in transverse flow during combustion

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 1, 1966, 130-139

TOPIC TAGS: combustion, flame stabilization, propulsion, afterburner, air breathing propulsion

ABSTRACT: An experimental study was made of flame stabilization by means of a transverse fan-shaped air jet injected perpendicularly into a circular burning jet. Air was preheated in a chamber by fuel combustion, and the combustion products with the excess air were passed through a section in which T-1 kerosene was injected to form a uniform combustible mixture. A fan-shaped hot air jet was discharged into the burning mixture. The temperature, velocity, and pressure profiles were measured to determine the dimensions of the recirculation zone. The results showed that the trajectories of the fan-shaped jets are steeper in the presence of combustion than in its absence, and the length and the width of the recirculation zones are larger. An empirical equation was obtained for calculating the jet trajectories and the maximum diameter of the recirculation zone. The profile of excess velocities in the zone of interaction

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L 23325-66

ACC NR: AP6011794

between a fan-shaped jet and a circular jet was found to be universal and similar to the profiles in the wake of a fan-shaped jet and behind a bluff body in the absence of combustion. Orig. art. has: 9 figures and 3 formulas. [PV]

SUB CODE: 21/ SUBM DATE: 09Apr65/ ORIG REF: 003/ OTH REF: 002/ ATD PRESS: 4232

Card 2/2

KOSTERIN V.V.

PINIGIN, A.F.; VYBOROV, G.P.; PETUKHOVA, O.S.; ISTOMINA, T.I.; YUZHKOVA, R.N.; KOBETS, B.V.; SVECHNIKOVA, L.D.; ZELIKMAN, Yu.Ya.; PADALKO, Z.F.; MIKHALOVSKAYA, Ye.M.; KALMYKOVA, A.D.; KOSTERIN, V.V.; BELKO, V.I.; KOSTENKO; MUSIKHINA

Distribution of brucellosis in Eastern Siberia and the Far East. Tez. i dokl.konf.Irk.gos.nauch.-issl.protivochum. inst.no.2:55-56 '57. (MIRA 11:3)

(SIBERIA, EASTERN--BRUCELLOSIS)
(SOVIET FAR EAST--BRUCELLOSIS)

SOV/137-59-1-329

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 41 (USSR)

AUTHORS: Glinkov, M. A., Kosterin, V. V.

TITLE: An Investigation of the Thermal Performance of a Recirculating Steel-smelting Furnace Designed by Prof. M. A. Glinkov Employing Ceramic Recuperators (Issledovaniye teplovoy raboty retsirkulyatsionnoy staleplavil'noy pechi sistemy prof. M. A. Glinkova s keramicheskimi rekuperatorami)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 1, pp 94-111

ABSTRACT: The 10-ton recirculating steel-smelting furnace (RSF) is equipped with two recuperators having a total area of 343 m^2. The furnace is fired with fuel oil, the degree of enrichment of air with O_2 being varied from 45 to 21% in the course of a heat. Compared with corresponding factors in open-hearth furnaces operated without O_2, the production efficiency of the RSF's is greater. The consumption of O_2 amounted at times to 270 kg/ton. An increase in the degree of oxidation of the slags constituted the major technological difficulty of the process; however, by means of appropriate selection of an

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An Investigation of the Thermal Performance of a Recirculating (cont.)

optimal oxygen-air ratio, this condition could be reduced to 14-18% ΣFe. The degree of oxidation of the metal was even lower in this process than in the case of standard open-hearth furnaces. A reduction in O_2 consumption is not justified economically since the cost of O_2 constitutes only a comparatively small fraction of the cost of a ton of steel. Owing to the insufficient length of the hearth, the advantages of two-sided heating of molten metal could not be fully evaluated, since the meeting of the flames in the center of the furnace produces a vigorous stream of gases resulting in the disintegration of the central portion of the crown of the furnace. The roof of the furnace could withstand a maximum of 473 smeltings. Because of the vigorous recirculation occurring within the hearth, the amount of smelting dust carried into the recuperators was considerably reduced (by 5-8 times), which greatly improved the operational performance of the latter.

M. M.

Card 2/2

BOCHKAREV, L.M.; BYKHOVSKIY, Yu.A., kand. tekhn. nauk; KUPRYAKOV, Yu.P.; KOSTERIN, V.V.; PARETSKIY, V.M.

Pilot plant testing of the smelting of copper sulfide concentrates in suspension with an oxygen blow. Sbor. nauch. trud. Gintsvetmeta no.23:115-126 '65. (MIRA 18:12)

CHISTYAKOV, I.G.; KOSTERIN, Ye.A.

Vitrified liquid-crystal films. Rost krist. 4:68-73 '64. (MIRA 17:8)

24-4-21/34

AUTHOR: Kosterin, Ye. V. (Moscow).

TITLE: Certain results of experiments on direct measurement of stress relaxation in clayey soils. (Nekotorye resul'taty opytov po pryamomu izmereniyu relaksatsii napryazheniy v glinistykh gruntakh).

PERIODICAL: "Izv. Ak. Nauk. Otd. Tekh. Nauk" (Bulletin of the Ac.Sc., Technical Sciences Section), 1957, No.4, pp.133-136 (USSR).

ABSTRACT: An instrument was designed which is shown in Fig.1, p.134 and is suitable for carrying out compression tests under conditions enabling free lateral expansion and also without the possibility of free lateral expansion. The instrument consists of a base plate, two columns which are bridged on top by a beam carrying in the centre a screw used for compressing the sample. The deformation is measured by measuring the level of the screw head, whilst the stresses are measured by means of strain gauges fitted on the two columns. The absolute deformation of the instrument itself during the tests did not exceed 2 to 6 microns, i.e. 0.5 to 1% of the deformation of the specimen. Under the guidance of N. A. Tsitovich a series of tests were made for studying the influence of humidity and of the magnitude of the deformation on the stress relaxation in clayey soils. The curves of Fig.2, p.135, show characteristic results on the influence of the humidity on the stress relaxation during compression under conditions of

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